

NOTE 2: Farmer Field Schools (FFS)

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There is plenty of information available in the public domain that covers various aspects of extension and know-how about new methodologies for implementation. However this information is often scattered and presented in complex academic language. Hence practitioners, who often have very limited time and/or may only have basic formal education, find it difficult to make use of this information.

The Global Good Practices Initiative aims to bridge this gap by providing information about extension approaches and methods in easy-to-understand formats. As part of this effort, it makes "Good Practice Notes" available to all on a downloadable website. This Note contains one of the extension methods included in this series.



Introduction

Farmer Field Schools (FFS) is a group-based adult learning approach that teaches farmers how to experiment and solve problems independently. Sometimes called "schools without walls", in FFS groups of farmers meet regularly with a facilitator, observe, talk, ask questions, and learn together. Farmer field schools as an approach was first developed to teach integrated pest management (IPM) techniques in rice farming, but it has also been used in organic agriculture, animal husbandry, and also non-farm income generating activities such as handicrafts.

FFS were originally used in the late 1980s by FAO with rice growers in Indonesia. The participants were selected

KEY FFS PRINCIPLES

- **Learning by doing** –adults learn better through experience rather than passive listening at lectures and demonstrations.
- **Every FFS is unique**, as far as content is concerned: Farmers decide what is relevant and what FFS should address.
- **Learning from mistakes** - each person's experience of reality is unique and valid.
- **Learning how to learn** - farmers build their capacity to observe, analyse, and make conscious decisions.
- **Problem posing/problem solving** - problems are posed as challenges not constraints.
- **Farmers' fields are the learning ground** - the field - crop or livestock production system - is the main learning tool.
- **Extension workers are facilitators not teachers** - because their role is to guide the learning process.
- **Unity is strength** - farmers in a group have more power than individual farmers.
- **All FFS follow a systematic training process** - key steps are **observation, group discussion, analysis, decision-making, and action-planning**.

Source: Groenweg, K., et.al. 2006. Livestock farmer field schools: Guidelines for facilitation and technical manual. Nairobi: ILRI.

based on their ability to read and write and to participate in discussions and analysis. Eventually, the program for rice was carried out in 12 Asian countries and gradually expanded to include new commodities such as vegetables, cotton, and other crops. This experience was further used to adapt and institutionalize FFSs in more than 90 countries of the world.

¹ Waddington, H. and Howard White. 2014. Farmer field schools: from agricultural extension to adult education .Systematic Review Summary 1. London, International Initiative for Impact Evaluation.



Philosophy and principles

The FFS approach is based on the fact that the best learning takes place by doing, rather than telling. The facilitator does not lecture the farmers, but helps them to learn by asking questions and building on their experience and observations. Farmers are encouraged to make their own discoveries and draw conclusions. As an extension approach, FFS differs from the traditional, top-down “transfer of technology” method. Farmers interact with researchers to ask for help only when they cannot solve a problem by themselves.

Most FFS projects aim to provide training in skills to improve agricultural production, but of late there is an increasing trend to reorient FFS to include empowerment objectives. Some projects have also included other objectives such as reducing gender inequality, targeting minority groups, community development, and strengthening producer groups.¹ Over the years, the scope of the FFS approach has expanded beyond agriculture/IPM to include issues such as water management, household livelihood security, improved access to public information by farmers, marketing networks, water and sanitation, and rural infrastructure development. Therefore, although it originates from agriculture, the FFS approach is fundamentally a participatory group approach for collective action and social mobilisation by the local community.²

Implementation

A typical FFS consists of 8-12 weeks of hands-on farmer experimentation and non-formal training during a single-crop growing session. Farmers are expected to attend weekly classes over one growing season. For arable crops and/or tree crops, meetings may be held fortnightly. For livestock, FFS groups meet for a full year - one 4-hour session per week - making implementing medium-term field experiments related to livestock issues, especially breeding and feeding of cattle, easier.

There are several preparatory steps leading up to the implementation of an FFS:

1. Identifying the focus of the FFS: This is the most critical step in preparing for a FFS activity. It is important to spend sufficient time on this in order to avoid involving farmers in activities that are not of interest to them. The selection of the FFS activity depends on farmers’ needs, interests, and the problems that they are currently facing.

2. Identifying participants and forming the learning group:

Depending upon the focus of the FFS activity, identify around 30-40 farmers who share a common concern or interest in the topic³. They must be able to attend all sessions, and willing to work together as a team and share ideas. Selecting more numbers of farmers initially helps as the group is likely to shrink after the first few sessions. It is also okay to select already-established groups like self-help groups, youth, and/or women’s groups. The facilitator’s familiarity with the history of the community, its cultural practices, gender relations, and potential areas of conflict are important elements in the selection process. Groups may consist of only men, only women, or mixed gender depending upon the culture and topic. The participants must be willing and capable of contributing financially or in material inputs, if required.

3. Identifying the learning site: Any FFS requires a location to hold meetings and a study object i.e. a field or an animal. The site and/or the animal must be suitable for the FFS activity in a given season and must be representative of the problems in the area. It must be easily accessible, and ideally the farmer owning the plot or animal should be present for most of the time in the FFS sessions.

4. Training of facilitators: The role of a facilitator is central to the FFS process. Each FFS needs a facilitator who takes participants through a series of hands-on exercises. Because it is not a typical extension approach, facilitators must undergo a special two to three week training program. Facilitators can be extension staff of government or non-governmental organisations, private companies, or graduates of a previous FFS.

TYPICAL FFS SESSION IN THE ORIGINAL INDONESIA PROGRAMME:

- 8.00** Opening (with a prayer where applicable); Attendance; Introduction to day’s activities.
- 8.30** Go to field in small teams; Make observation, take notes. Facilitator points out new developments.
- 9.30** Return to shade. Begin making agro-ecosystem analysis, drawing and discuss management decisions.
- 10.15** Each team presents results and the group arrives at a consensus on management needs for the coming week.
- 11.00** Tea/ Coffee break
- 11.15** Energiser or group-building exercise
- 11.30** Special study topic or second crop/ livestock study. This could include nutrition, or chicken, or parasites, or something else of special interest to the group.
- 12.30** Closing (often with prayer)

Source: Gallagher, K. 2003. Fundamentals of a Farmer Field School. LEISA Magazine.

² Jayashantha, D.L Chamila and Puvaneswary Ponniah. (2013). Strengthening rural governance: Farmer field schools as a strategy to build human capital in conflict affected Jaffna District of Sri Lanka. CARE International. Available: http://www.napsipag.org/pdf/D_L.pdf.

³ Groeneweg, K. et.al. (2006). Livestock farmer field schools: guidelines for facilitation and technical manual. International Livestock Research Centre: Nairobi, Kenya. p.1-11

5. Developing the curriculum: Once the FFS group is formed, the facilitator develops the curriculum based on the main problems identified by the group. Together with the group, the facilitator decides which activities to take up in order to further explore the problems, test the solutions, and identify what kind of help/ resources are needed. FFS follows the natural cycle of its subject, be it a crop (seed-to-seed), or livestock (egg-to-egg), soil, or handicrafts. Key activities include agro-ecosystem analysis, field comparative experiments, group discussion, and learning exercises. Sometimes field visits to other FFS sites might also be included. Each activity is well structured, i.e. has a procedure for action, observation, analysis, and decision-making. The emphasis is not only on "how" but also on "why". This helps to cover all aspects of the subject and link up with what is happening in the farmer's own field so that the lessons learnt can be applied directly. If the curriculum is not sufficiently tailored to suit the needs and resources of farmers, they are likely to lose interest.

Capacities required

The effectiveness of FFS depends largely upon the facilitator's role and attitude. S/he is expected to encourage participants to ask questions and reach their own conclusions. It helps if the facilitator has farming experience. More than technical knowledge or higher educational degrees, it is important for facilitators to have good leadership skills, the ability to listen, be sensitive to group dynamics, and be well versed with participatory techniques⁴. In order to hone their skills, it is recommended that each facilitator guides at least three FFS per year.

In the longer term it is desirable to have a team of farmer facilitators who have the advantage of knowing the community and the area well, and are likely to be accepted better by other farmers who speak their local language. Moreover, being local, they require less transportation and financial support, and can operate independently. Farmers who are interested in becoming facilitators can be identified in course of the FFS process. These "FFS graduates" are usually given special farmer facilitator training of 10-14 days to improve their technical knowledge and develop organisational and facilitation skills.

Costs

Typically most FFS have been implemented through externally-funded programmes that cover the costs of facilitator training, curriculum development, running field schools, field days, supervision, and snacks for farmers attending.

Costs of FFS projects vary according to setting and content. As in most extension programmes, transport is

one of the biggest costs. In 1996-97 the cost of an FFS facilitated by a professional extension worker in Indonesia was US\$532, which covered the facilitator's honorarium, preparation and coordination expenses, transport, materials/inputs, stipends (of around US\$0.43 per session), refreshments for participating farmers, compensation for the farmer providing the experimental field, and field day expenses⁵. In the recent years, the cost per participant is reported to be around US\$20-40 per participant. This does not include the cost to participants for attending the FFS and may vary according to the crop and country.⁶ In Eastern Africa, where self-financed (revolving fund) and semi-self-financed (with a grant) FFS are in place, farmers share costs and contribute towards continuity and sustainability by using commercial plots to repay loans to run the schools beyond third-party funded projects⁷.

Strengths and weaknesses

Like all other extension approaches, FFS also has certain advantages and problems when it comes to what it can and cannot do⁸.

- **Format:** The informal and participatory nature of FFS programmes with built-in group dynamics and team building exercises makes it a good entry point for discussion on broader livelihood issues. FFS might not be efficient if used only for increasing yields through "message delivery" or for demonstrating a technology.
- **Strengths:** FFS activities rely more on farmers' own discovery and reflection - so there is no risk of farmers not trusting extension workers due to ineffectiveness of incorrect/blanket recommendations. Moreover, the learning capacities built in FFS can be applied in other problem-solving situations in different contexts. FFS provides opportunities for farmer-to-farmer extension and can reduce farmers' dependence on formal extension systems.
- **Participation:** FFS can help strengthen social capital at the local level. FFS processes help to build self-confidence - especially for women farmers - and the schools can be a good platform for vulnerable farmers to come together for collective action. Nevertheless, the intensive and demanding nature of FFS activities can make participation of vulnerable households including women-headed households difficult.
- **Sustainability:** Some programs pay farmers for attending but that is likely to affect the longer term sustainability of FFS as an extension approach.
- **Impact:** While FFS shows positive impact on knowledge and productivity locally, it has been difficult to link it to diffusion of improved farmer practices at a wider scale.

⁴ Waddington, H. and Howard White. 2014. *Farmer field schools: from agricultural extension to adult education. Systematic Review Summary 1*. London, International Initiative for Impact Evaluation. p.15.

⁵ Braun, A. R. (1997) in Braun, A.R., et.al. 2000. *Farmer field schools and local agricultural research committees: complementary platforms for integrated decision making in sustainable agriculture*. AGREN Network Paper No.105. London: ODI-Agriculture Research & Extension Network.

⁶ Waddington, H. and Howard White. 2014. *Farmer field schools: from agricultural extension to adult education. Systematic Review Summary 1*. London, International Initiative for Impact Evaluation. p.23.

⁷ Anandajayasekeram, P., et.al. 2007. *Farmer field schools: an alternative to existing extension systems? Experience from Eastern and Southern Africa*. Journal of Int'l Agri. and Ext. Edu. V 14(1), p.81-93.

⁸ Adapted from Braun, A. et.al. (2006). *A global survey and review of farmer field school experiences*. ILRI, Nairobi, Kenya. Available: <http://intranet.catie.ac.cr/intranet/posgrado/Met%20Cual%20Inv%20accion/MCIAP2010/Semana%203/DocumentosSem310/Review%20of%20FFS%20Braun%202006.pdf>



There is evidence to show that FFS graduates and FFS groups may or may not stay together in the longer term.

- **Cost effectiveness:** One of the major challenges of justifying FFS as a form of public investment in farmer education has been determining the cost effectiveness of FFS. FFS are criticised for being labour-intensive with relatively high programme and travel costs and limited outreach, i.e. only a small number of interested farmers. A key outcome of FFS is farmers' empowerment, which is difficult to quantify and measure. Although they mostly depend on external funding, some East African countries have successfully tried out self-financed FFS programmes.

Governance and management

At the local level, existing organisations and self-help groups can be a good entry point for FFS activities, provided the members are willing to invest time. In most contexts, FFS graduates have showed willingness to organise themselves into networks or associations while some have integrated into existing organisations. For instance, in Uganda's national extension programme (NAADS), FFS are well integrated into the District Farmer Fora. This has provided an excellent institutional framework for taking up agriculture development.

Potential impact

The main challenge when defining impact of the FFS approach is to decide whether it results in higher knowledge about complex issues, and/or whether the knowledge outcomes in turn translate into greater productivity and yields. Most available impact studies refer to IPM-related outcomes in terms of changes in pesticide use and yields. Broadly speaking, based on qualitative evidence coming from small scale pilots, participation in FFS has shown improvement in farmers' knowledge of farming technology, confidence with problem solving, and better decision-making skills. Some other studies support the view that participation in FFS empowered farmers and improved collaboration towards collective action.

Training materials

SUSTAINET EA. 2010. *Technical manual for farmers and field extension service providers: Farmer field school approach*. Nairobi: Sustainable Agriculture Information Initiative.

Groeneweg, K. et.al. (2006). *Livestock farmer field schools: guidelines for facilitation and technical manual*. International Livestock Research Centre: Nairobi, Kenya.

Further reading

Anandajayasekeram, P., et.al. 2007. *Farmer field schools: an alternative to existing extension systems? Experience from Eastern and Southern Africa*. Journal of Int'l Agri. and Ext. Edu. V 14(1).

Braun, A. R. 2000. *Farmer field schools and local agricultural research committees: Complementary platforms for integrated decision making in sustainable agriculture* Vol. No.105. London: ODI-Agriculture Research & Extension Network.

Davis, K. 2006. *Farmer Field Schools: A Boon or Bust for Extension in Africa?* Journal of International Agricultural and Extension Education 13(1): 91-97.

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Photo Page 1: Martín García, LEISA Magazine 2006

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